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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/030,469

08/12/2002

Gerhard Koelle

1909

9183

7590

05/26/2004

Striker Striker & Stenby
103 East Neck Road
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EXAMINER

NATALINI, JEFF WILLIAM

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,469

Applicant(s)

KOELLE ET AL.

Examiner

Jeff Natalini

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/8/02</u> . | 6) <input type="checkbox"/> Other: ____. |

Claim Objections

1. Claim 1 objected to because of the following informalities:

- The preamble of the claim contains "for example" this is not specific claim language and it is unclear as to what is claimed. It is assumed that the applicant is giving an example of a possible embodiment of the present invention and the claim will be treated on the merits on all statements including and following the phrase "characterized in that".
- "can be" on line 5 of the claim is indefinite claim language though will be treated on the merits.

Appropriate correction is required.

Claim 9 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on any other multiple dependent claim (multiple dependent claim 9 depends on multiple dependent claim 8). See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al. (4874993).

In regard to claim 1, Tanaka et al. discloses a method for ascertaining the pole wheel position in electrical machines characterized in that by means of switch elements (Fig 1(1); Abstract first sentence), a split into two branches can be produced (col 2 line 41-45, Fig 2(La, Lb can form two branches)), in which the respective branch voltage curves are measured (col 3 line 45-60), the superposition of which permits the pole wheel position to be definitely ascertained (col 2 line 29-32).

In regard to claim 2, Tanaka et al. discloses the method characterized in that the voltage source is an alternating voltage source (col 3 line 39-43) with a voltage curve that changes over time (Fig 4a).

In regard to claim 3, Tanaka et al. discloses the method characterized in that the voltage source is an alternating voltage source (col 3 line 39-43) with a sinusoidal voltage curve (Fig 4a).

In regard to claim 6, Tanaka et al. discloses the method in that in the first switch position, the voltage curve is measured (col 3 line 45-60) in an inner branch (col 2 line 31-32, representing windings in coil La and voltage Ea).

In regard to claim 7, Tanaka et al. discloses the method in that in the second switch position, the voltage curve is measured (col 3 line 45-60) in an inner branch (col 2 line 31-32, representing windings in coil Lb and voltage Eb).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2858

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (4874993) in view of Huggett et al. (5949204).

Tanaka et al. lacks a method that teaches having the windings of the stator wired in a star-shaped circuit.

Huggett et al. teaches using three windings of the stator to form a star shape circuit (Fig 1 (A,B,C)).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Tanaka et al. to use the teaching of Huggett et al. to incorporate the use of three windings forming a star shaped circuit in the stator in order to allow the production of a "rotating" magnetic field when a current is flowed sequentially through any set of two windings (col 1 line 63-68) allowing a voltage measurement across a conducting winding and/or a non conducting winding.

Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (4874993) in view of Antognini et al. (5194787).

Tanaka et al. lacks a method that teaches having the windings of the stator wired in a triangular circuit.

Antognini et al. teaches using three windings to form a triangular shaped circuit (Fig 3 (A1, B1, C1)).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Tanaka et al. in view of Antognini et al. to incorporate a triangular shaped circuit containing three windings in the stator in order for all windings to be supplied in power at each supply state of the motor (col 1 line 31-35).

Claims 8/6 and 8/7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (4874993) in view of Dunfield (5028852).

Tanaka lacks a method characterized in that the rotor position for each of the voltage curves is stored in tabular form and can be transferred to similar electrical machines.

Dunfield teaches a method characterized in that the rotor position is clearly defined in a table of results (Abstract last two sentences), which can be incorporated in hardware memory or software memory (microprocessor) (col 7 line 28-33).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Tanaka et al. to incorporate a table controlled by a microprocessor (so that the data in the microprocessor can be duplicated/transferred into another microprocessor of a similar device) in view of Dunfield in order to provide a storage for all the reference values that are determined and compared to the detected value in finding the rotor position (this would be an added feature to the microprocessor that Tanaka et al. already disclose).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Natalini whose telephone number is 571-272-2266. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on 571-272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeff Natalini



N. Le
Supervisory Patent Examiner
Technology Center 2800